

THE EFFECTS OF THE HYDROID, *CORDYLOPHORA* SP., ON LARVAL  
SETTLEMENT OF THE ZEBRA MUSSEL, *DREISSENA POLYMORPHA*, IN THE  
DES PLAINES RIVER, ILLINOIS

Emily E. Thorn

Nadine C. Folino-Rorem\*

Wheaton College

Wheaton College

Biology Department, Wheaton College, Wheaton, IL 60187

emily.e.thorn@wheaton.edu

The hydroid *Cordylophora* sp. and the zebra mussel *Dreissena polymorpha* are both invasive fouling organisms that coexist in the Des Plaines River outside of Joliet, Illinois. Little is known about the interactions of these two species with one another. This study was designed to examine the effect of *Cordylophora* sp. on the larval settlement of the zebra mussel. An eighteen-week field experiment was conducted in the Des Plaines River. PVC treatment plates containing either dead, live, or no *Cordylophora* sp. were placed in the Des Plaines River in frames constructed of PVC pipe. The plates were removed bi-weekly and preserved in alcohol for examination. In addition, weekly temperature, conductivity, and flow measurements were taken. Larval samples were taken every week to determine the presence of *Dreissena polymorpha* larvae in the water. We hypothesized that the live *Cordylophora* sp. would inhibit the settlement of *Dreissena polymorpha* larvae by ingesting the larvae. The dead *Cordylophora* sp. would increase the settlement of *Dreissena polymorpha* by providing a substrate suitable for zebra mussel larvae attachment. The PVC plates with no *Cordylophora* sp. served as the control. Both plates and larval sample data are currently undergoing analysis for the presence of *Dreissena polymorpha* settlement. Cross-polarized microscopy is being used to locate and quantify larval presence. Understanding how *Cordylophora* sp. may enhance or deter settlement of zebra mussel larvae will provide information about the impact these species have on river ecosystems and on each other.